AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. Please amend Claims 1, 8-9, 11-16 and 26 and add Claims 32-33 as follows:

1. (Currently Amended) A method for characterizing packet interarrival times on an Asynchronous Transfer Mode or ATM network, comprising:

providing (a) a number of packets in a first portion of a plurality of packets that will be or have been transported on an ATM network, the packets in the first portion containing at least one of voice and video information, and (b) a number of packets in a second portion of the plurality of packets, the packets in the second portion containing information other than the at least one of voice and video information;

generating with a lognormal number generator a plurality of packet interarrival times ~~values~~ corresponding to at least some of the packets in the first portion; and

generating with a normal number generator a plurality of packet interarrival times corresponding to at least some of the packets in the second portion, wherein a packet interarrival time is a time interval between the arrivals of temporally adjacent, individual packets.

2. (Previously Presented) The method of Claim 1, wherein the number of packets in the first portion represents a first percentage of the plurality of packets, wherein the number of packets in the second portion represents a second percentage of the plurality of packets, and wherein the providing step includes (i) multiplying (a) the first percentage; and (b) the plurality of packets to provide the number of packets in the first portion and (ii) multiplying (a) the second percentage and (b) the plurality of packets to provide the number of packets in the second portion.

3. (Original) The method of Claim 1, wherein the generating step for the packets in the first portion includes the step of inputting the number of packets in the first portion and a mean and a variance of a lognormal distribution characterizing packet interarrival times of the packets in the first portion into the lognormal number generator.

4. (Original) The method of Claim 1, wherein the generating step for the packets in the second portion includes the step of inputting the number of packets in the second portion and a mean and a variance of a normal distribution characterizing packet interarrival times of the packets in the second portion into the normal number generator.

5. (Original) The method of Claim 1, further comprising combining the plurality of interarrival times output by the lognormal number generator and the plurality of interarrival times output by the normal number generator.

6. (Original) The method of Claim 1, further comprising providing a lognormal fraction of packets in the second portion having lognormally distributed packet interarrival times and a normal fraction of packets in the second portion having normally distributed packet interarrival times and wherein the generating step for the packets in the second portion is applied to the number of packets in the normal fraction of packets and further comprising for the number of packets in the lognormal fraction of packets generating a plurality of packet interarrival times using a lognormal number generator.

7. (Original) The method of Claim 6, further comprising combining the plurality of packet interarrival times output by all of the number generators to provide a synthetic traffic stream.

8. (Currently Amended) A method for simulating traffic in an Asynchronous Transfer Mode or ATM network, the ATM network transporting a stream of packets, the packet stream including a plurality of packets, comprising:

generating an at least substantially lognormally distributed set of interpacket [[inter]]arrival times corresponding to the plurality of packets, wherein an interpacket arrival time is a time interval between the arrivals of temporally adjacent, individual packets.

9. (Currently Amended) The method of Claim 8, wherein the stream of packets further includes a second plurality of packets, the interpacket arrival times of the second plurality of packets being distributed differently from the interpacket arrival times of the plurality of packets; and further comprising:

generating an at least substantially normally distributed set of interpacket [[inter]]arrival times corresponding to the second plurality of packets.

10. (Previously Presented) The method of Claim 9, wherein the number of packets in the first plurality represents a first percentage of the packet stream, wherein the number of packets in the second plurality represents a second percentage of the packet stream, and further comprising: (i) multiplying (a) the first percentage and (b) a number of packets in the packet stream to provide the number of packets in the first plurality of packets and (ii) multiplying (a) the second percentage and (b) the number of packets in the packet stream to provide the number of packets in the second plurality of packets.

11. (Currently Amended) The method of Claim 8, wherein the generating step for the packets in the plurality of packets includes the step of inputting the number of packets in the plurality of packets and a mean and a variance of a lognormal distribution

characterizing interpacket [[inter]]arrival times of the packets in the plurality of packets into a lognormal number generator.

12. (Currently Amended) The method of Claim 9, wherein the generating step for the packets in the second plurality of packets includes the step of inputting the number of packets in the second plurality of packets and a mean and a variance of a normal distribution characterizing interpacket [[inter]]arrival times of the packets in the second plurality of packets into a normal number generator.

13. (Currently Amended) The method of Claim 8, further comprising combining the plurality of interpacket [[inter]]arrival times output by a lognormal number generator and the plurality of interpacket [[inter]]arrival times output by a normal number generator.

14. (Currently Amended) The method of Claim 9, wherein the interpacket [[inter]]arrival times of the packets in the plurality of packets are less than a predetermined value and the interpacket [[inter]]arrival times of the packets in the second plurality of packets are more than the predetermined value.

15. (Currently Amended) The method of Claim 9, wherein the generating step of Claim 8 for the packets in the plurality of packets includes the step of inputting the number of packets in the plurality of packets and a mean and a variance of a lognormal distribution characterizing interpacket [[inter]]arrival times of the packets in the plurality of packets into a lognormal number generator and wherein the generating step of Claim 9 for the packets in the second plurality of packets includes the step of inputting the number of packets in the second plurality of packets and a mean and a variance of a normal

distribution characterizing interpacket [[inter]]arrival times of the packets in the second plurality of packets into a normal number generator; and

further comprising combining the plurality of interpacket [[inter]]arrival times output by all of the number generators to provide a synthetic traffic stream.

16. (Currently Amended) A system for simulating traffic on an Asynchronous Transfer Mode or ATM network, wherein a plurality of packets are in a packet stream that will be or have been transported on an ATM network, the system comprising:

lognormal number generating means for generating an at least substantially lognormally distributed plurality of values corresponding to the plurality of packets, , wherein a packet interarrival time is a time interval between the arrivals of temporally adjacent, individual packets.

17. (Original) The system of Claim 16 further comprising a second plurality of packets in the packet stream.

18. (Original) The system of Claim 17, wherein the plurality of packets correspond to packet interarrival times less than a selected value, and the second plurality of packets correspond to packet interarrival times greater than the selected value.

19. (Original) The system of Claim 17, further comprising normal number generating means for generating an at least substantially normally distributed plurality of values corresponding to the second plurality of packets.

20. (Original) The system of Claim 16, further comprising lognormal inputting means for inputting the number of packets in the plurality of packets and a mean and a

variance of a lognormal distribution characterizing packet interarrival times of the packets in the plurality of packets into the lognormal number generating means.

21. (Original) The system of Claim 17, further comprising normal inputting means for inputting the number of packets in the second plurality of packets and a mean and a variance of a normal distribution characterizing packet interarrival times of the packets in the second plurality of packets into the random number generating means.

22. (Original) The system of Claim 19, further comprising combining means for combining the plurality of values output by the lognormal number generating means and the plurality of values output by the normal number generating means.

23. (Original) The system of Claim 17, wherein the interarrival times corresponding to the packets in the plurality of packets have a substantially lognormal distribution and the interarrival times corresponding to the packets in the second plurality of packets have a substantially normal distribution.

24. (Original) The system of Claim 18, wherein a lognormal fraction of packets in the second plurality of packets have lognormally distributed packet interarrival times and a normal fraction of packets in the second plurality of packets have normally distributed packet interarrival times and wherein the normal number generating means is applied to the number of packets in the normal fraction of packets and further comprising for the packets in the lognormal fraction of packets lognormal number generating means for generating a second plurality of at least substantially lognormally distributed values.

25. (Original) The system of Claim 24, further comprising combining means for combining the plurality of lognormal and normal values output by all of the number generating means to provide a synthetic traffic stream.

26. (Currently Amended) A system for characterizing traffic on an Asynchronous Transfer Mode or ATM network, wherein first and second pluralities of packets are in a packet stream that will be or have been transported on an ATM network, the system comprising:

a lognormal number generator operable to generate a plurality of at least substantially lognormally distributed packet interarrival time values corresponding to the first plurality of packets;

a normal number generator operable to generate a plurality of at least substantially normally distributed packet interarrival time values corresponding to the second plurality of packets; and

a combiner, in communication with the lognormal random number generator and the normal random number generator, operable to combine the plurality of at least substantially lognormally distributed packet interarrival time values and the plurality of at least substantially normally distributed packet interarrival time values to provide an aggregate stream of packet interarrival time values, wherein a packet interarrival time is a time interval between the arrivals of temporally adjacent, individual packets.

27. (Original) The system of Claim 26, wherein at least some of the first plurality of packets contain at least one of voice and video information, and the second plurality of packets contain information other than the at least one of voice and video information.

28. (Original) The system of Claim 26, wherein the first plurality of packets correspond to packet interarrival times less than a selected value, and the second plurality of packets correspond to packet interarrival times greater than the selected value.

29. (Original) The system of Claim 26, further comprising a lognormal input, in communication with the lognormal number generator, for inputting the number of packets in the first plurality of packets and a mean and a variance of a lognormal distribution characterizing packet interarrival times of the packets in the first plurality of packets into the lognormal number generator.

30. (Original) The system of Claim 26, further comprising a normal input, in communication with the normal number generator, for inputting the number of packets in the second plurality of packets and a mean and a variance of a normal distribution characterizing packet interarrival times of the packets in the second plurality of packets into the normal number generator.

31. (Original) The system of Claim 26, wherein the interarrival times corresponding to the packets in the first plurality of packets have a substantially lognormal distribution and the interarrival times corresponding to the packets in the second plurality of packets have a substantially normal distribution.

32. (New) The method of claim 1, wherein the packet interarrival times for the at least some of the packets in the first and second portions are distributed according to the following equation:

$$F(x)=\Psi\cdot\Lambda(\mu_1,\delta^2_1,) + (1-\Psi)\cdot N(\mu_2,\delta^2_2)$$

where the mixing parameter, Ψ, is about 0.97,

μ_1 is the mean of the lognormal distribution output by the lognormal number generator,

δ_1^2 is the variance of the lognormal distribution,

μ_2 is the mean of the normal distribution output by the normal number generator, and

δ_2^2 the variance of the normal distribution.

33. (New) The system of claim 26, wherein the packet interarrival times output by the combiner are distributed according to the following equation:

$$F(x)=\Psi\cdot\Lambda(\mu_1.\delta^2_1,) + (1-\Psi)\cdot N(\mu_2,\delta^2_2)$$

where the mixing parameter, Ψ, is about 0.97,

μ_1 is the mean of the lognormal distribution output by the lognormal number generator,

δ_1^2 is the variance of the lognormal distribution,

μ_2 is the mean of the normal distribution output by the normal number generator, and

δ_2^2 the variance of the normal distribution.